

REMARKS

Applicant has reviewed the Office Action mailed on May 31, 2006 as well as the art cited. Claims 19, 21, and 25 have been amended, claims 18 and 27 have been cancelled. Claims 1-6, 9-17, 19-26, 28-32, 35-41, and 43-51 are pending in this application. Claims 52-56 have been added.

Rejections Under 35 U.S.C. § 102

Claims 18 and 27 were rejected under 35 USC § 102(e) as being anticipated by Yaguchi (U.S. Patent No. 6,980,584). Claims 18 and 27 have been cancelled.

Rejections Under 35 U.S.C. § 103

Claims 1-6, 28-32, 35-39, 43, 44, and 49-51 were rejected under 35 USC § 103(a) as being unpatentable over Ueda (U.S. Patent No. 5,787,118) in view of Coonce et al. (U.S. Patent No. 4,064,370). Application respectfully traverses these rejections.

Claim 1

Regarding Claim 1, in the Response to Arguments section, the Office Action dated 05/31/06 stated “as long as the combination of the references does not change the principle of operation of the prior art invention being modified, then the teachings of the references are sufficient to render the claims *prima facie* obvious”. Applicant respectfully asserts that the rule above is inconsistent with the law and the MPEP.

To establish a *prima facie* case of obviousness, suggestion or motivation to modify the art must be found either within the references or in the knowledge generally available (MPEP 2143). Additionally, when a proposed modification changes the principle of operation of the prior art, then the teachings are *not* sufficient to find a motivation to combine (MPEP 2143.01). The negative of this statement, however, does not hold true. Namely, just because a proposed

modification does not change the principle of operation, does not mean that the teachings *are* sufficient to find a motivation to combine. In fact, the MPEP states that mere fact that references *can* be combined does *not* render the combination obvious (MPEP 2143.01). In addition to being able to be combined, the prior art must also suggest the desirability of the combination (MPEP 2143.01). Thus, a motivation to combine the prior art must still be shown notwithstanding a combination that does not change the principle of operation.

Applicant respectfully asserts, that here, no motivation to combine has been shown or can be found. The Office Action dated 05/31/06 stated that the buffers of Coonce et al. could modify Ueda to “provide controllable time sequencing of data signals”. Ueda, however, does not need to control the time sequencing of data signals, because the data signals of Ueda are stored in memory and released on command. Specifically, Ueda provides, “equalizer 41 outputs the result of equalization of the random data 12 to the equalized-output memory 43.” Col. 20, lines 46-48. Ueda continues, “the comparator 47 outputs a control signal for connection of the equalized output memory 43 and the output selector switch 48.” Col. 21, lines 15-17. Since the data signals of Ueda are stored, and not immediately processed, the timing of the data signals does not matter. There would have been no need, therefore, to control the time sequencing of the data signal in Ueda. Thus, there would have been no motivation, or even a plausible reason, to modify Ueda with the buffers of Coonce et al. As a result, applicant respectfully requests that claim 1 be allowed.

Claims 2-6 depend either directly or indirectly on claim 1 and, as a result, applicant respectfully requests that claims 2-6 be allowed.

Claim 28

Regarding claim 28, the Office Action dated 05/31/06 stated that Ueda and Coonce et al. “disclose all the limitations of claim 28 (see rejections of claims 1).” Since there is no motivation or suggestion to combine Ueda and Coonce et al. according to the argument of claim 1, and since neither Ueda nor Coonce et al. alone disclose all the limitations of claim 28, applicant respectfully requests that claim 28 be allowed.

Claims 29-32, 35-36 depend either directly or indirectly on claim 28 and, as a result, applicant respectfully requests that claims 28-32, 35-36 be allowed.

Claim 37

Regarding claim 37, the Office Action dated 05/31/06 stated that Ueda and Coonce et al. disclose all the limitations of claim 37. Since there is no motivation or suggestion to combine Ueda and Coonce et al. according to the argument of claim 1, and since neither Ueda nor Coonce et al. alone disclose all the limitations of claim 37, applicant respectfully requests that claim 37 be allowed.

Claims 38, 39, 43, 44 depend either directly or indirectly on claim 37 and, as a result, applicant respectfully requests that claims 38, 39, 43, 44 be allowed.

Claim 49

Regarding claim 49, the Office Action dated 05/31/06 stated that Ueda and Coonce et al. disclose all the limitations of claim 49. Since there is no motivation or suggestion to combine Ueda and Coonce et al. according to the argument of claim 1, and since neither Ueda nor Coonce et al. alone disclose all the limitations of claim 49, applicant respectfully requests that claim 49 be allowed.

Claims 50-51 depend either directly or indirectly on claim 49 and, as a result, applicant respectfully requests that claims 50-51 be allowed.

Claims 9 and 10 were rejected under 35 USC § 103(a) as being unpatentable over Yaguchi ('584) in view of Zak et al. (U.S. Patent No. 6,084,926). Applicant respectfully traverses these rejections.

Claim 9

The Office Action dated 05/31/06 stated "it would have been obvious ... to modify the decoders of Yaguchi with forward error correction (FEC) as taught by Zak et al. since Zak et al. states FEC can provide error corrections on the received data (column 5, lines 2-11)." Applicant respectfully submits that at the time the invention was made there would have been no motivation to combine Zak et al. with Yaguchi, because there was no motivation to add error

correction to Yaguchi. The Office Action dated 05/31/06 provided no indication of anything within Yaguchi that suggests a need to add error correction. Without a showing of a need to add error correction to Yaguchi, there is no motivation to combine the forward error correction from Zak et al. with Yaguchi. As a result, applicant respectfully requests that claim 9 be allowed.

Claim 10 depends directly on claim 9 and, as a result, applicant respectfully requests that claim 10 be allowed.

Claims 21-26 were rejected under 35 USC § 103(a) as being unpatentable over Yaguchi ('584) in view of Ueda ('118). Applicant respectfully traverses these rejections.

Claim 21

The Office Action date 05/31/06 stated "it would have been obvious ... to modify the device of Yaguchi with the equalizers of Ueda for selection of the best path based on the adaptive equalizers and the decoders since Ueda states adaptive equalizers reduce performance degradation (column 1, line 10-16)." Applicant respectfully submits that there would have been no motivation to combine Ueda with Yaguchi, because there was no motivation to modify Yaguchi with adaptive equalizers. There is no indication from the Office Action dated 05/31/06 that Yaguchi had a problem with performance degradation. Since Yaguchi does not have a problem with performance degradation, there would have been no need to modify Yaguchi with the adaptive equalizers of Ueda. There would have been no motivation, therefore, to combine the adaptive equalizers from Ueda with Yaguchi. As a result, applicant respectfully requests that claim 21 be allowed.

Claims 22-26 depend either directly or indirectly on claim 21 and, as a result, applicant respectfully requests that claims 22-26 be allowed.

Claims 45 and 48 were rejected 35 USC § 103(a) as being unpatentable over Yaguchi ('584) in view of Kameya (U.S. Patent No. 4,313,202). Applicant respectfully traverses these rejections.

Claim 45

Regarding claim 45 the Office Action date 05/31/06 stated “it would have been obvious ... to modify the equalizers of Yaguchi with the filtering as taught by Kameya to select of the best path based on the filters and the decoders since Kam[e]ya states the filtering can perform compromise equalization (column 5, lines 2-9, wherein equalization compensates for delay).”

Applicant respectfully submits that Kameya combined with Yaguchi does not disclose all the elements of claim 45, and that Kameya and Yaguchi provide no motivation to be combined. Neither Kameya nor Yaguchi discloses loading coefficients for a selected time slot of the communication channel into a plurality of parallel equalizers. Yaguchi, *inter alia*, does not provide for coefficients, and Kameya, *inter alia*, does not provide for loading coefficients into a plurality of equalizers. Additionally, the Office Action dated 05/31/06 provides no indication of a problem within Yaguchi that would require modification of the equalization method by loading coefficients. Thus, there would have been no motivation to combine Yaguchi with Kameya. As a result, applicant respectfully requests that claim 45 be allowed.

Claim 48 depends directly from claim 48 and, as a result, applicant respectfully requests that claim 48 be allowed.

Claims 11-16 were rejected under 35 USC § 103(a) as being unpatentable over Yaguchi ('584) in view of Zak et al. ('926) as applied to claim 9 above, and in further view of Ueda ('118). Applicant respectfully traverses these rejections.

Claim 11

Regarding claim 11, the Office Action stated “it would have been obvious ... to modify the device of Yaguchi and Zak et al. with the equalizers of Ueda for selection of the best path based on the adaptive equalizers and the decoders”. Since there is no motivation to combine Ueda with Yaguchi as stated above in reference to claim 21 and also no motivation to combine Zak et al. with Yaguchi as stated above in reference to claim 9, applicant respectfully submits that claim 11 be allowed.

Claims 12-16 depend either directly or indirectly on claim 11 and, as a result, applicant respectfully requests that claims 12-16 be allowed.

Claim 17 is rejected 35 USC § 103(a) as being unpatentable over Yaguchi ('584) in view of Zak et al. ('926) as applied to claim 9 above, and in further view of Coonce et al. ('370). Applicant respectfully traverses these rejections.

Claim 17

Regarding claim 17, the Office Action stated "it would have been obvious ... to modify the device of Yaguchi and Zak with the teaching of Coonce et al. in order to process each data path in sequence (Coonce et al., column 4, lines 62-64) and maintain synchronization between the data paths (column 8, lines 8-22)."

As stated with respect to claim 9, there would have been no motivation to combine Yaguchi with Zak et al. Claim 17 depends directly on claim 9 and, as a result, applicant respectfully requests that claim 17 be allowed.

Claims 40 and 41 are rejected under 35 USC § 103(a) as being unpatentable over Ueda ('118) in view of Coonce et al. ('370) as applied to claim 37 above, in further view of Zak et al. ('926). Applicant respectfully traverses this rejection.

Claim 40

Regarding claim 40 and 41, the Office Action dated 05/31/06 stated that Ueda, Coonce et al., and Zak et al. disclose all the limitations of claims 40 and 41. As stated with respect to claim 37, there is no motivation or suggestion to combine Ueda and Coonce et al. Claims 40 and 41 depend directly on claim 37 and, as a result, applicant respectfully requests that claims 40 and 41 be allowed.

Claim 46 is rejected under 35 USC § 103(a) as being unpatentable over Yaguchi ('584) in view of Kameya ('202) as applied to claim 45 above, and in further view of Ueda ('118). Applicant respectfully traverses this rejection.

Claim 46

Kameya is non-analogous art as stated with respect to claim 45 above and claim 46 is dependent upon claim 45. Claim 46 depends directly on claim 45 and, as a result, applicant respectfully requests that claim 46 be allowed

Claim 47 is rejected under 35 USC § 103(a) as being unpatentable over Yaguchi ('584) in view of Kameya ('202) as applied to claim 45 above, and in further view of Zak et al. ('926). Applicant respectfully traverses this rejection.

Claim 47

Kameya is non-analogous art as stated with respect to claim 45 above and claim 47 is dependent upon claim 45. Claim 47 depends directly on claim 45 and, as a result, applicant respectfully requests that claim 47 be allowed

Allowable Subject Matter

Claims 19 and 20 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant thanks Examiner for the indication that Claims 19 and 20 would be allowable. Claims 19 has been amended to include the limitations of claim 18 and claim 20 depends directly from claim 19.

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Attorney Docket No. 100.015US01


Title: PARALLEL EQUALIZATION FOR SYSTEMS USING TIME DIVISION MULTIPLE ACCESS

CONCLUSION

Applicant respectfully submits that claims 1-6, 9-17, 19-26, 28-32, 35-41, and 43-51 are in condition for allowance and notification to that effect is earnestly requested. If necessary, please charge any additional fees or credit overpayments to Deposit Account No. 502432.

If the Examiner has any questions or concerns regarding this application, please contact the undersigned at 612-332-4720.

Respectfully submitted,

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